CHAPTER 11   COSTS

INFOCUS

WPL_J410

Money is one of the primary elements of a project that must be kept under strict control.

Microsoft Project can assist you in planning, forecasting and tracking *costs* associated with a project.

Most costs accumulated in a project are generated through the variable use of resources, although there are also fixed costs and special one-off costs such as permits, travel, and the like.

In this session you will:

- ✓ gain an understanding of costs in *Microsoft Project*
- ✓ learn how to review the current cost status of a project
- ✓ learn how to assign variable costs to resources
- ✓ gain an understanding of how variable costs are assigned to many resources
- ✓ learn how to assign daily costs to resources
- ✓ learn how to assign per usage costs to resources
- ✓ learn how to assign fixed costs to tasks
- ✓ learn how to assign costs to materials
- ✓ learn how to create multiple cost tables for a resource
- ✓ learn how to apply a different cost rate table
- ✓ learn how to assign changing cost rates
- ✓ learn how to assign a *Cost Resource* to a task
- ✓ learn how to view the overall project costs.

UNDERSTANDING PROJECT COSTS

Microsoft Project can perform some very elaborate and sophisticated cost analyses on your projects. The tools and features in Microsoft Project will allow you to create an overall project budget and to track actual expenses with relative ease. Microsoft Project allows you to create *variable* costs, *fixed* costs and *cost-per-use* costs.

Variable Resource Costs

The most common type of costing in Microsoft Project is the variable costing assigned to a resource. This is usually the hourly standard and overtime rates for labour, or an hourly standard rate assigned to machinery usage. The way this works in Microsoft Project is a bit like a spreadsheet – you enter an hourly rate into a resource sheet and Microsoft Project will apply that rate to all areas where the resource has been assigned to calculate a total costing for you.

A nice feature with variable costs is that you can tell Microsoft Project when to **accrue** these variable costs. Variable costs can be accrued at the beginning or end of a task, or prorated as the task is underway. The table below explains the differences.

Accrual Type	Usage
Beginning	All costs are accrued at the start of the task. This is used when an up front payment is required before work commences
Prorata	Costs are accrued according to the amount of work that has been performed. If 50% of the work is completed then 50% of the costs will be shown
End	All costs are accrued at the end of the task. This is used in situations where you might be invoiced for the services of a contractor – the invoice is generally raised at the completion of the work.

A slight variation on these variable costs is a **per usage cost**. Let's say you need to hire a thing-a-me-bob to dig holes. The hire company may charge you on an hourly basis and this would be the **variable** costing. However, they may charge you an administration fee each time you hire the equipment. In Microsoft Project you would enter this administration cost into the **cost-per-use** field for the resource.

Fixed Costs

Microsoft Project allows you to assign a **fixed cost** against a task. For example, you may have negotiated some contract work at a fixed price for your project. In our case study, Scott Harris, the project manager, has negotiated for the foundations to be poured by a concrete company. He pays a fixed contract price for everything to do with this task – materials, labour, equipment, and the like.

The Cost Resource

In Microsoft Project there is also a **cost resource**. This may sound a little confusing. Generally, costs are associated with a *resource* – an hourly rate for labour or a cost-per-use for machinery. But there are some costs, such as those associated with travel, or training, or permits, or even a party that may not be appropriate to link to a particular resource. Microsoft Project provides you with a **cost resource** for these situations – in our case study we have created two of them: one for building permits and the other for our end-of-project party. You ever only enter a cost value for these at the time they are assigned to a task.

Happy, happy, happy Project Managers

What is nice about Microsoft Project is that you can mix and match all of these cost elements within your project and you can check the status of the costing at any time. You may, for example, have tasks that have variable cost labour, cost-per-use equipment, and some fixed cost contractual components. When you enter all of these elements Microsoft Project will calculate a total cost for the task and extrapolate that up into the total cost of the summary tasks and then ultimately up into the total project level.

REVIEWING CURRENT COSTS

In this session you will be working with the costs for **The Rostadium** project. The project file you will open has appropriate calendars and 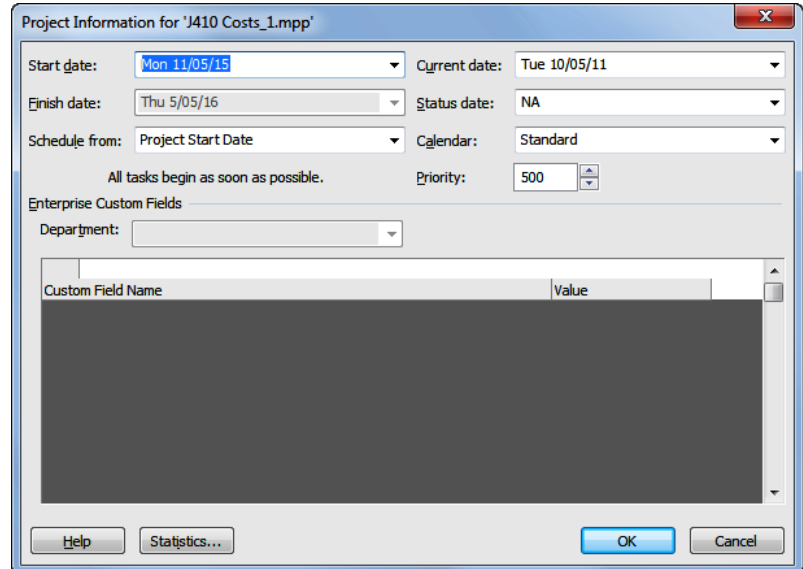project summary information, tasks, durations and milestones, resources and resource assignments. But it doesn't yet have any cost data. The best way to check the cost status of a project is to use the **Project Statistics** dialog box.
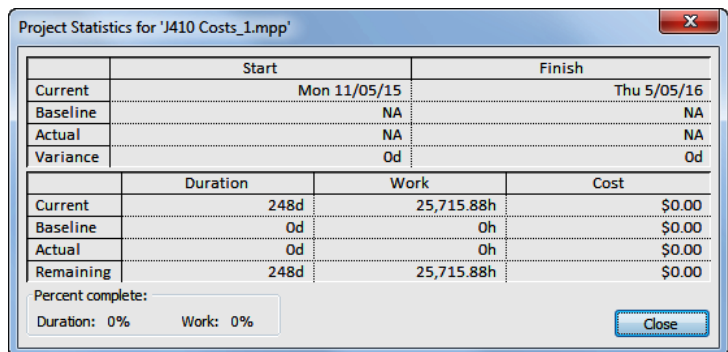
Try This Yourself:

Open File

Before starting this exercise you MUST open the file J410 Costs_1.mpp...

1 Click on the **Project** tab on the **Ribbon** and click on **Project Information**

2 Click on **[Statistics]** to display the **Project Statistics** dialog box which shows total project costs

There probably won't be too many costs here just yet!

3 Click on **[Close]**

1

2

	Start	Finish
Current	Mon 11/05/15	Thu 5/05/16
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	248d	25,715.88h	$0.00
Baseline	0d	0h	$0.00
Actual	0d	0h	$0.00
Remaining	248d	25,715.88h	$0.00

Percent complete:

Duration: 0%   Work: 0%

For Your Reference…

To display **total project costs**:

1. Click on the **Project** tab on the **Ribbon** and click on **Project Information**
2. Click on **[Statistics]** to display the **Project Statistics** dialog box

Handy to Know…

- It is a good idea to regularly display the **Project Statistics** dialog box as you enter costs just to ensure things are progressing as they should.

ENTERING VARIABLE COSTS

In a project, most of your costs come from the resources that are carrying out the tasks. Typically this will be either labour or machinery which is costed on an hourly basis. The costs are calculated by the duration of the task, or the working hours of the resource multiplied by the amount entered in the *Std Rate* and the *Ovt Rate* in the *Resource Sheet*.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_1.mpp...

1 Click on the *View* tab on the *Ribbon* and click on *Resource Sheet* in the *Resource Views* group

2 Click on *$0.00/hr* in *Std. Rate* for *Architect*

3 Type **160** and press Tab to jump to *Ovt. Rate*. Type **160** and press Tab twice to jump to *Accrue At*

4 Click on the drop arrow that has appeared and click on *End*

   The Architect will invoice us when his work is done...

5 Click on *$0.00/hr* in *Std. Rate* for *Draftsperson*

6 Type **48000/y** and press Tab to jump to *Ovt. Rate*. Type **57000/y** and press Tab to complete the entry

7 Click on the *Project* tab, click on *Project Information* and click on **[Statistics]**

8 Click on **[Close]**

9 Repeat steps *2* to *6* to enter the information shown on the following page

Resource Name	Type	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Ba
Architect	Work Itant	100%	$160.00/hr	$160.00/hr	$0.00	Prorated	St
Draftsperson	Work	100%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Building Clerk	Work	100%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Supervisor	Work	100%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Rigger	Work	500%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Boilermaker	Work	600%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Welder	Work	500%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Carpenter	Work	600%	$0.00/hr	$0.00/hr	$0.00	Prorated	St

3

Resource Name	Type	Material	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Ba
Architect	Work	100%	$160.00/hr	$160.00/hr	$0.00	End	St
Draftsperson	Work	100%	48,000.00/yr	57,000.00/yr	$0.00	Prorated	St
Building Clerk	Work	100%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Supervisor	Work	100%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Rigger	Work	500%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Boilermaker	Work	600%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Welder	Work	500%	$0.00/hr	$0.00/hr	$0.00	Prorated	St
Carpenter	Work	600%	$0.00/hr	$0.00/hr	$0.00	Prorated	St

6

Project Statistics for 'J410 Costs_1.mpp'

	Start	Finish
Current	Mon 11/05/15	Thu 5/05/16
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	248d	25,715.88h	$30,443.08
Baseline	0d	0h	$0.00
Actual	0d	0h	$0.00
Remaining	248d	25,715.88h	$30,443.08

Percent complete:

Duration: 0%   Work: 0%

[Close]

7

For Your Reference…

To *assign variable costs* to resources:

1. Display a *Resource Sheet* view
2. Type a variable cost rate in *Std. Rate* and *Ovt. Rate*

Handy to Know…

- Always enter an amount for overtime. In some cases, such as salaried professionals who do not get paid overtime, you may be inclined to leave the field blank. If you then assign overtime, they will be charged at zero. The overtime hours should be charged at cost as an absolute minimum.

CASE STUDY VARIABLE COSTS

Most larger projects will require you to enter quite a deal of information about the variable costs for the resources. In our case we have about 30 resources, many of which will require variable rates for both **Std.** and **Ovt.** to be entered. This is part of the hard slog associated with setting up a project. There aren't any real tricks or traps here so enter the amounts shown below.

Resource Name	Std. Rate	Ovt. Rate
Building Clerk	42000/y	63000/y
Supervisor	45000/y	67500/y
Rigger	18.95	28.43
Boilermaker	20.66	30.99
Welder	20.25	30.38
Carpenter	21.50	32.25
Painter	12.90	19.35
Labourer	15.50	23.25
Driver	17.56	26.34
On The Hammer	65.25	97.88
Listen Ear Audio	116.80	116.80
In Focus Video	178.00	178.00
Pure Grass Turf	195.00	195.00
Plumber	22.65	33.98
Electrician	21.56	32.34

Large amounts, such as 42000, are annual salaries. That is why they are entered with a /y after them to indicate that this is an annual amount. Microsoft Project will convert this amount into an hourly basis for calculation purposes.

Note that in order to provide a bit more "realism" the list of resources at the left here isn't the same as the order of resources in the project file!

		Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue At
1	📝	Architect	Work		Arc	Consultant	100%	$160.00/hr	$160.00/hr	$0.00	End
2		Draftsperson	Work		Dft	Staff	100%	48,000.00/yr	57,000.00/yr	$0.00	Prorated
3		Building Clerk	Work		BC	Staff	100%	42,000.00/yr	63,000.00/yr	$0.00	Prorated
4		Supervisor	Work		Sup	Staff	100%	45,000.00/yr	67,500.00/yr	$0.00	Prorated
5		Rigger	Work		Rig	Wages	500%	$18.95/hr	$28.43/hr	$0.00	Prorated
6		Boilermaker	Work		BM	Wages	600%	$20.66/hr	$30.99/hr	$0.00	Prorated
7		Welder	Work		Weld	Wages	500%	$20.25/hr	$30.38/hr	$0.00	Prorated
8		Carpenter	Work		Car	Wages	600%	$21.50/hr	$32.25/hr	$0.00	Prorated
9		Painter	Work		Ptr	Wages	500%	$12.90/hr	$19.35/hr	$0.00	Prorated
10		Labourer	Work		Lab	Wages	1,000%	$15.50/hr	$23.25/hr	$0.00	Prorated
11		Driver	Work		Drv	Wages	200%	$17.56/hr	$26.34/hr	$0.00	Prorated
12		No Barrier Fencing	Work		NBF	Contractor	100%	$0.00/hr	$0.00/hr	$0.00	Prorated
13		Rock Solid Concrete	Work		RSC	Contractor	100%	$0.00/hr	$0.00/hr	$0.00	Prorated
14		Listen Ear Audio	Work		LEA	Contractor	100%	$116.80/hr	$116.80/hr	$0.00	Prorated
15		In Focus Video	Work		IFV	Contractor	100%	$178.00/hr	$178.00/hr	$0.00	Prorated
16		Pure Grass Turf	Work		PGT	Contractor	100%	$195.00/hr	$195.00/hr	$0.00	Prorated
17		Building Inspector	Work		BI	Governmer	100%	$0.00/hr	$0.00/hr	$0.00	Prorated
18		High Jib Crane	Work		HJC	Equipment	100%	$0.00/hr	$0.00/hr	$0.00	Prorated
19		Grader	Work		Grd	Equipment	200%	$0.00/hr	$0.00/hr	$0.00	Prorated
20		Air Compressor	Work		AC	Equipment	100%	$0.00/hr	$0.00/hr	$0.00	Prorated
21		Utility	Work		U	Equipment	200%	$0.00/hr	$0.00/hr	$0.00	Prorated
22		Astro Turf	Material	Square Metre	Grass	Material		$0.00		$0.00	Prorated
23		Paint	Material	Litre	Paint	Material		$0.00		$0.00	Prorated
24		Building Permit	Cost		BPerm	Cost					Prorated
25		End of Project Party	Cost		Party	Cost					Prorated
26		Plumber	Work		P		200%	$22.65/hr	$33.98/hr	$0.00	Prorated
27		Electrician	Work		E		300%	$21.56/hr	$32.34/hr	$0.00	Prorated
28		On The Hammer	Work		OTH	Contract La	1,000%	$65.25/hr	$97.88/hr	$0.00	Prorated
29		Diesel Fuel	Material	Litre	DF	Fuel		$0.00		$0.00	Prorated
30		Unleaded Petrol	Material	Litre	UP	Fuel		$0.00		$0.00	Prorated

ASSIGNING DAILY COSTS

A number of projects involve the hire of equipment, which is charged out on a daily basis. You can enter these types of charges into Microsoft Project in much the same way as you enter the salaries for labour. To enter a *daily charge* for an item simply type the rate followed by */d.* When you do this Microsoft Project will still internally convert the rate to an hourly rate.

Try This Yourself:

Open File

Before starting this exercise you MUST open the file J410 Costs_2.mpp...

1. Click on *$0.00/hr* in *Std. Rate* for the *High Jib Crane*

2. Type **2700/d** and press Enter

   Since we pay a daily hire cost there is no need to enter an overtime amount. If the equipment is used in overtime hours, there is no additional charge to us…

3. Repeat steps *1* and *2* and add a daily rate for the following:

Grader	**1565/d**
Air Compressor	**1280/d**
Utility	**215/d**

4. Click on the *Project* tab, click on *Project Information* and click on [Statistics]

5. Click on [Close] to close the dialog box and return to the project

2

Resource Name	Type	Group	Max.	Std. Rate	Ovt. Rate
Pure Grass Turf	Work	Contractor	100%	$195.00/hr	$195.00/hr
Building Inspector	Work	Governmer	100%	$0.00/hr	$0.00/hr
High Jib Crane	Work	Equipment	100%	2,700.00/day	$0.00/hr
Grader	Work	Equipment	200%	$0.00/hr	$0.00/hr
Air Compressor	Work	Equipment	100%	$0.00/hr	$0.00/hr
Utility	Work	Equipment	200%	$0.00/hr	$0.00/hr

3

Resource Name	Type	Group	Max.	Std. Rate	Ovt. Rate
Pure Grass Turf	Work	Contractor	100%	$195.00/hr	$195.00/hr
Building Inspector	Work	Governmer	100%	$0.00/hr	$0.00/hr
High Jib Crane	Work	Equipment	100%	$2,700.00/day	$0.00/hr
Grader	Work	Equipment	200%	$1,565.00/day	$0.00/hr
Air Compressor	Work	Equipment	100%	$1,280.00/day	$0.00/hr
Utility	Work	Equipment	200%	$215.00/day	$0.00/hr
Astro Turf	Materi	Material		$0.00	
Paint	Materia	Material		$0.00	
Building Permit	Cost	Cost			

4

Project Statistics for 'J410 Costs_2.mpp'

	Start	Finish
Current	Mon 11/05/15	Thu 5/05/16
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	248d	25,715.88h	$905,265.30
Baseline	0d	0h	$0.00
Actual	0d	0h	$0.00
Remaining	248d	25,715.88h	$905,265.30

Percent complete:
Duration: 0%   Work: 0%

[Close]

For Your Reference…

To *assign* a *daily cost*:

1. Display a *Resource Sheet* view
2. Type the daily cost (*/d* to make it a daily rate) in *Std. Rate* for the desired resource
3. Repeat step *2* for *Ovt. Rate*
4. Press Enter

Handy to Know…

- You should be careful also when it comes to allocating the *accrual* method. If you have to pay for the resource in advance you should change accrual to *Beginning*. If you pay on invoice at the end of the usage you should change the accrual to *End*. In our case study we will leave accrual as *prorata*.

ASSIGNING PER USAGE COSTS

Some resources are charged on a ***cost-per-use*** basis. The ***Per Use Cost*** field is used to include a charge that is added once for each unit of a resource that is assigned to any task. Sounds like a mouthful, but the ***cost per use*** is a one-time cost for a resource used on a task. It is great for one-off costs such as a call-out charge for a tradesman or the flag-fall charge in a taxi.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_3.mpp...

1. Double click on ***High Jib Crane*** to display the ***Resource Information*** dialog box

2. Click on the ***Costs*** tab to display the ***Costs*** information

   In our case study the hire equipment incurs a daily hire charge. It also incurs an additional expense to cover insurance and administration. This is charged to us on a cost-per-use basis. It doesn't matter whether we hire the equipment for a day or for a year we only incur the additional expense once…

3. Type **1200** in ***Per Use Cost***, then press `Enter`

4. Click on **[OK]**

5. Repeat steps *1* to *4* for the resources as shown

   Let's see what this has done to the costs...

6. Click on the ***Project*** tab, click on ***Project Information*** and click on **[Statistics]**

7. Click on **[Close]**
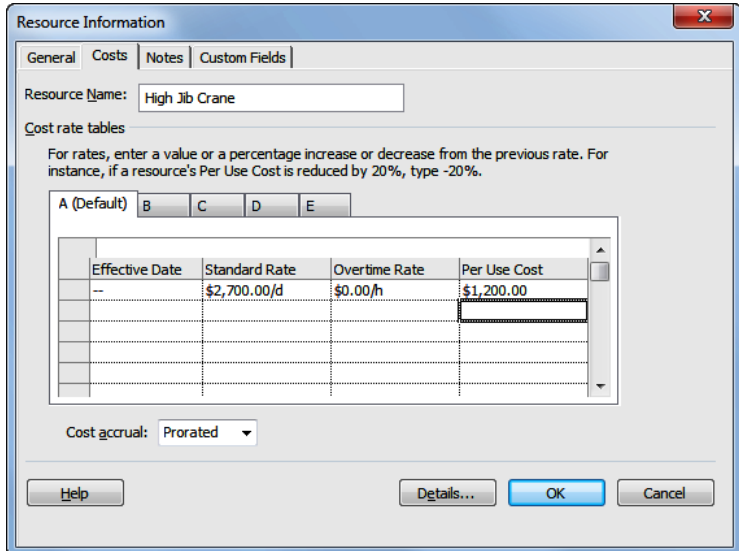
③

⑤

Resource	Per Use Cost
Grader	600
Air Compressor	200
Utility	67
On The Hammer	75

⑥
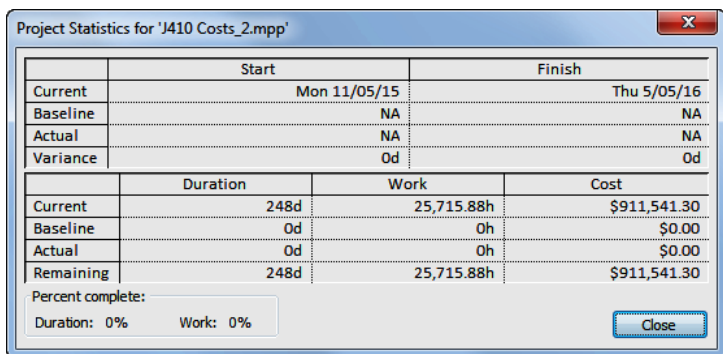
For Your Reference…

To ***assign*** one time usage ***costs***:

1. Double click on the resource, then click on the ***Costs*** tab
2. Type the one-time usage cost in ***Per Use Cost***
3. Click on **[OK]**

Handy to Know…

- You can have the ***Cost Per Use*** charge on its own. You can also have it in combination with the ***Std. Rate*** and ***Ovt. Rate***, as would be the case where a call-out fee and an hourly rate is charged for service calls.
- Use ***Resource Usage*** view to see how and where specifically a resource is used.

ASSIGNING FIXED COSTS

The **Per Use Cost** field for resources allows you to assign a **fixed** usage cost to a resource. Each time you use that resource you incur that fixed cost. If you want that cost to occur only once you can assign a fixed cost to the task rather than the resource. In our case study this is handy for contract charges, which have been negotiated for a particular activity or task.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_4.mpp...

1. Click on the **View** tab on the **Ribbon**, click on **Other Views** in **Task Views**, and click on **Task Sheet**

   This sheet doesn't have any cost fields so we'll need to adjust the table…

2. Click on **Tables** in **Data** and click on **Cost**

   This table gives you a break up of costs. We'll use it for entering fixed costs for a task…

3. Click in **Fixed Cost** for **Erect fencing**, type **15900** and press Enter

4. Click in **Fixed Cost** for **Pour foundations**, type **895000** and press Enter

5. Click on the **Project** tab, click on **Project Information** and click on **[Statistics]**

6. Click on **[Close]**

For Your Reference…

To **assign fixed costs** for a task:

1. Display a **Task Sheet** view with the **Costs** table
2. Type the appropriate cost into the **Fixed Cost** field for the desired task and press Enter

Handy to Know…

- You can also set the accrual method in the **Fixed Cost Accrual** field in the **Cost** table so that the costs are accrued either at the beginning or the end of the task.

ASSIGNING MATERIAL COSTS

In Microsoft Project, costs for materials are applied the same way as costs for work resources. You can apply the costs using ***Std. rates*** where Microsoft Project will determine the costs based on the usage. This is ideal for consumable materials such as nails, timber, fuel and the like, and allows you to track expenditure as the task progresses.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_5.mpp...

1 Click on the ***View*** tab on the ***Ribbon*** and click on ***Resource Sheet*** in ***Resource Views***

For all of the materials, the turf, the paint, and the fuel, we wish to be able to track costs as the materials are consumed. By assigning a cost per metre to Astro Turf, Project will use this rate and multiply it by the total number of metres that we have indicated will be required in the assignment of the turf…

2

	Resource Name	Type		Max.	Std. Rate	Ovt. Rate	Cost/Use
	Grader	Work	ent	200%	$1,565.00/day	$0.00/hr	$600.00
	Air Compressor	Work	nt	100%	$1,280.00/day	$0.00/hr	$200.00
	Utility	Work	t	200%	$215.00/day	$0.00/hr	$67.0
	Astro Turf	Material			$65.27		$0.00
	Paint	Material			$0.00		$0.0
	Building Permit	Cost					
	End of Project Party	Cost					
	Plumber	Work		200%	$22.65/hr	$33.98/hr	$0.0

5 *These costs are entered as a **unit rate** in the **Std Rate** field of the resource sheet. Microsoft Project assumes that this is a normal **rate** and multiplies it by the number of units of the material assigned to a task. For example, if you enter $5.00 for paint in the resource sheet, and then assign 20 units in a task, Microsoft Project will calculate the cost at $100.00.*

	Resource Name	Type		Max.	Std. Rate	Ovt. Rate	Cost/Use
	End of Project Party	Cost					
	Plumber	Work		200%	$22.65/hr	$33.98/hr	$0.0
	Electrician	Work		300%	$21.56/hr	$32.34/hr	$0.0
	On The Hammer	Work	La	1,000%	$65.25/hr	$97.88/hr	$75.00
	Diesel Fuel	Material			$1.89		$0.0
	Unleaded Petrol	Material			$1.76		$0.00

2 Click in ***Std. Rate*** for ***Astro Turf***, type **65.27** and press ⏎Enter

3 Type **8.76** in ***Std. Rate*** for ***Paint*** and press ⏎Enter

4 Click in ***Std. Rate*** for ***Diesel Fuel***, type ***1.89*** and press ⏎Enter

5 Type **1.76** in ***Std. Rate*** for ***Unleaded Petrol*** and press ⏎Enter

6 Click on the ***Project*** tab, click on ***Project Information*** and click on **[Statistics]**

7 Click on **[Close]**

6

Project Statistics for 'J410 Costs_5.mpp'

	Start	Finish
Current	Mon 11/05/15	Thu 5/05/16
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	248d	25,715.88h	$3,031,362.55
Baseline	0d	0h	$0.00
Actual	0d	0h	$0.00
Remaining	248d	25,715.88h	$3,031,362.55

Percent complete:

Duration: 0%   Work: 0%

[Close]

For Your Reference…

To ***assign materials costs***:

1. Display a ***Resource Sheet*** view
2. Type the cost in the ***Std. Rate*** field and press ⏎Enter

Handy to Know…

- You can also assign a ***cost-per-use*** charge, which effectively allows you to create a fixed cost for the materials.

USING ANOTHER COST TABLE

Microsoft Project lets you assign different rates for the same resource in the project by creating additional **cost rate tables** for the resource. This is useful where a resource may charge different rates depending upon the task that they are performing. Access to these different tables is made available through the **Resource Information** dialog box.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_6.mpp...

1 Scroll up to and double-click on **Architect** to display the **Resource Information** dialog box, then click on the **Costs** tab to see the costings of this resource

2 Click on the **B** tab to see a different series of costs

Now our friends the architects normally charge us an hourly fee. For special jobs however, such as submitting documentation (where their proverbials are on the line) they up the fee (have to pay for the Porsche somehow)...

3 Click in **Standard Rate** and type **450**

4 Click in **Overtime Rate** , type **450** and press [Enter]

5 Click on **[OK]** to record the change
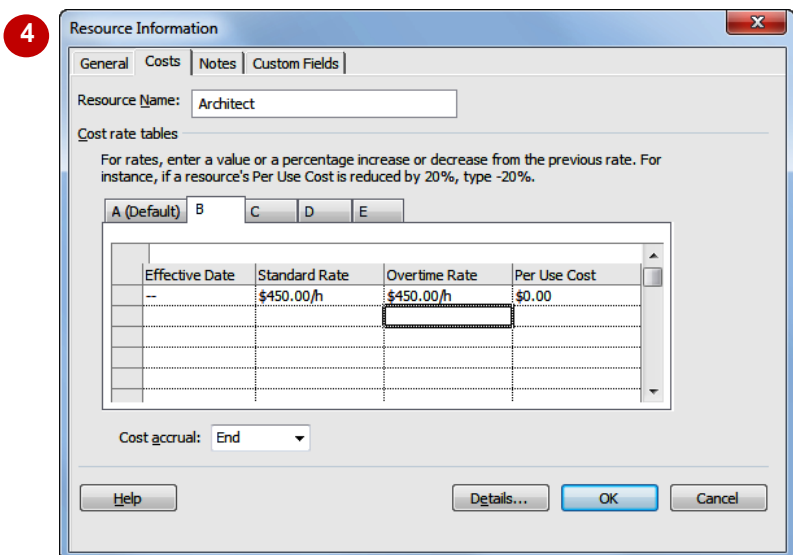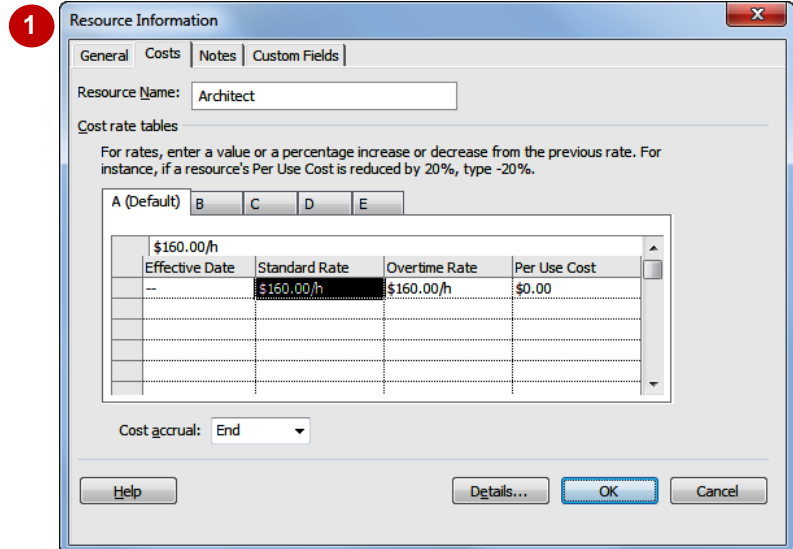
For Your Reference…

To **use multiple cost tables**:

1. Double-click on the desired resource, then click on the **Costs** tab
2. Click on the drop arrow for **Cost accrual**
3. Click on the desired table and enter the desired rates. Click on **[OK]**

Handy to Know…

- You can specify a percentage rate change in a cost rate table from a set date. Once you have entered the effective date, type in the percentage change in the **Standard Rate**, **Overtime Rate** and **Per Use Cost** fields, eg. +10% or -7.5%. The actual rate is then calculated and appears in the field.

APPLYING A DIFFERENT COST TABLE

Microsoft Project allows you to specify different costs for resources at different times throughout the project by using cost rate tables. The default **Cost rate table** applied to resources is 'A'. If you have more than one cost rate table for a resource, you will need to specify which table is used for different assignments.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_7.mpp...

1 Click on the **View** tab on the **Ribbon** and click on **Resource Usage** in **Resource Views**

2 Scroll to and click on **Submit plans for approval** under **Architect**, click on the **Task** tab on the **Ribbon** and click on **Scroll to Task**

3 Click on the **Format** tab on the **Ribbon** and click on **Cost** in the **Details** group

4 Scroll to the right until you can see the last cost entry – a value will appear there because the resource costs are accrued at the end of an assignment

5 Double-click on **Submit plans for approval** to display the **Assignment Information** dialog box and click on the **General** tab

6 Click on the drop arrow for **Cost rate table** and click on **B**

7 Click on **[OK]** to use this cost table in the task

For Your Reference…

To apply a different cost table:

1. Double click on a task and click on the **General** tab of the **Assignment Information** dialog box
2. Click on the drop arrow for **Cost rate table** and click on a different table

Handy to Know…

- You can have up to 5 cost rate tables for each resource and you can create a graduated scale of rates if you use them all.

CHANGING RATES DURING A PROJECT

Microsoft Project allows you to enter rate changes for resources in a project. This is done by nominating an *effective date* for the change and then entering the new rates effective from that date. Scott Harris has been in detailed negotiations with the carpenters' union. The carpenters have won themselves a 25% pay rise effective from January 1, 2016.
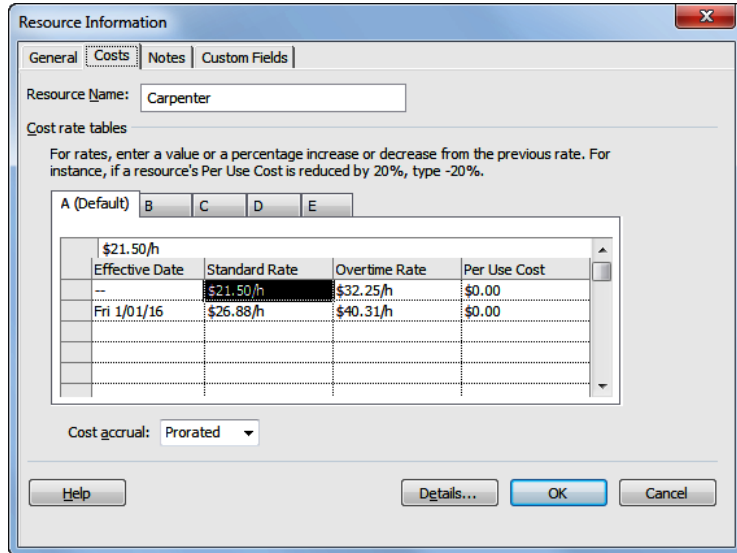
Try This Yourself:

Same File

> *Continue using the previous file with this exercise, or open the file J410 Costs_8.mpp...*

1 Click on the *View* tab on the *Ribbon* and click on *Resource Sheet* in *Resource Views*

2 Double click on *Carpenter* and click on the *Costs* tab

3 Click in the *Effective Date* cell in the second row and complete the details as shown

4 Click on **[OK]**

> *Now let's see what impact this has had on the project…*

5 Click on *Resource Usage* in *Resource Views*

6 Click on *Erect wall* below *Carpenter*, click on the *Task* tab on the *Ribbon* and click on *Scroll to Task*

7 Scroll right until you can see *January*

> *The hours should still show 45 but the new table will have kicked in and the cost will be higher*

Resource Information dialog box

General | Costs | Notes | Custom Fields

Resource Name: Carpenter

Cost rate tables

For rates, enter a value or a percentage increase or decrease from the previous rate. For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.

A (Default) | B | C | D | E

	$21.50/h		
Effective Date	Standard Rate	Overtime Rate	Per Use Cost
--	$21.50/h	$32.25/h	$0.00
Fri 1/01/16	$26.88/h	$40.31/h	$0.00

Cost accrual: Prorated

Help | Details... | OK | Cancel

3

ⓘ	Resource Name	Work	Add New Colur	Details		
					T	W
	⊟ Carpenter	2,970 hrs		Work	45h	45h
				Cost	$967.50	$967.50
	Erect site buildin	120 hrs		Work		
				Cost		
	Erect wall	1,800 hrs		Work	45h	45h
				Cost	$967.50	$967.50
	Erect seating tier	675 hrs		Work		

6

ⓘ	Resource Name	Work	Add New Colur	Details		
					T	W
	⊟ Carpenter	2,970 hrs		Work	45h	45h
				Cost	$1,209.60	$1,209.60
	Erect site buildin	120 hrs		Work		
				Cost		
	Erect wall	1,800 hrs		Work	45h	45h
				Cost	$1,209.60	$1,209.60
	Erect seating tier	675 hrs		Work		

7

For Your Reference…

To *assign* changed *rates* from a specific date:
1. Double click on the desired resource
2. Click on the *Costs* tab
3. Click in the next free *Effective Date* cell and enter the relevant date and rate details

Handy to Know…

- It can sometimes be hard to track down changing rates in a project. If you do have to change the rates for a resource make a note of it in the *Notes* field in the *Resource Information* dialog box. Microsoft Project will display a notes icon next to resources with *Notes* as a reminder.

ASSIGNING COST RESOURCES

Microsoft Project also has a separate **cost** resource which can be a little hard to get your head around. This is actually a resource that appears in the resource pool but doesn't have a cost value until it is assigned to a task. It is great for costs that aren't directly influenced by the duration of a task or the usage of other resources. It is similar to a fixed cost.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_9.mpp...

1. Click on the **View** tab on the **Ribbon** and click on **Gantt Chart** in the **Task Views** group

2. Double click on **Submit plans for approval** to display the **Task Information** dialog box and click on the **Resources** tab
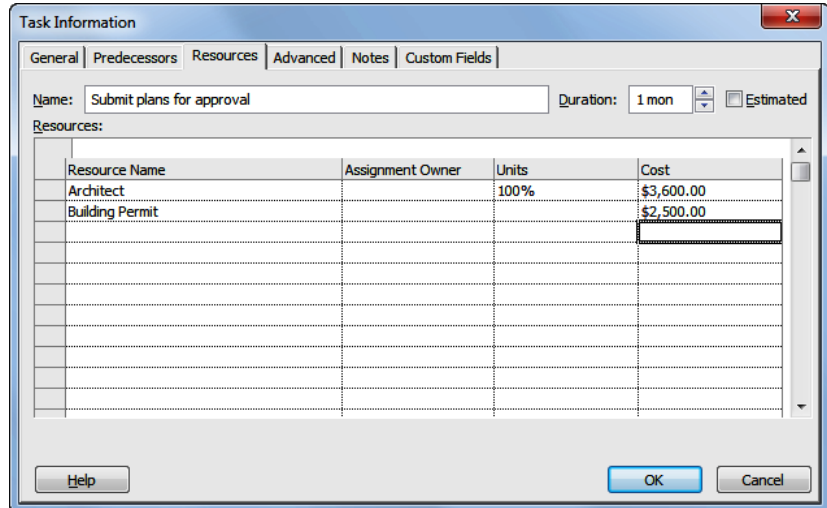
3. Click below **Architect**, click on the drop arrow ▼ and click on **Building Permit**

   Since this is a cost resource there are no units to worry about, only a cost value to assign…
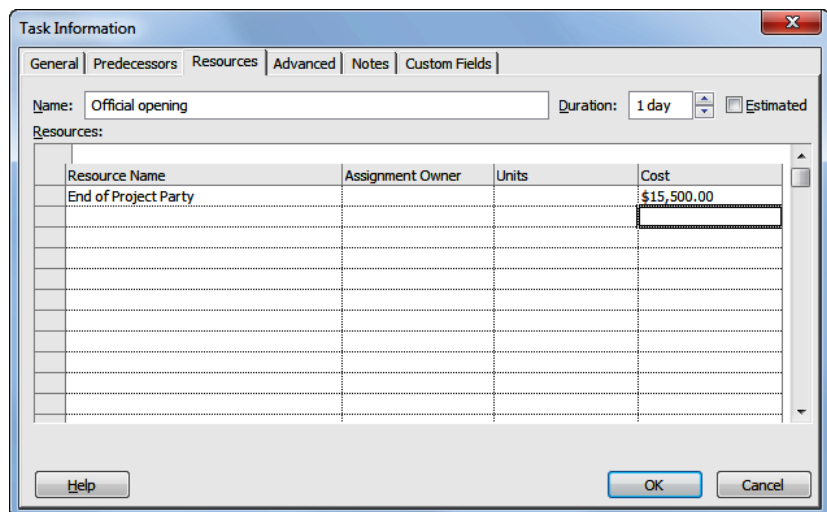
4. Click in **Cost**, type **2500** and press [Enter]

5. Click on **[OK]**

6. Repeat the above steps and assign the **End of Project Party** at a cost of **15500** to the **Official Opening** task

4

6

For Your Reference…

To **assign cost resources** to a task:

1. Double click on a task and click on the **Resources** tab
2. Choose a cost resource in **Resource Name** and enter a cost in the **Cost** field

Handy to Know…

- So why not just enter these amounts as **Fixed Costs** for a task? You can do this, but by creating a **Cost Resource** you can actually itemise the fixed costs associated with a task. For example, if the *party* and the *permits* above were assigned as a fixed cost you'd only see a total amount for the two.

VIEWING PROJECT COSTS

When all of the costs have been entered you can rest assured that there are many ways in Microsoft Project for you to view those costs. You can use the *Project Statistics* dialog box to see the total project costs. You can use different views and tables to see the costs for tasks and also the costs for resources.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file J410 Costs_10.mpp...

1 Click on the *Project* tab on the *Ribbon*, click on *Project Information* and click on **[Statistics]** to see the *Project Statistics* dialog box

2 Click on **[Close]**

3 Click on the *View* tab on the *Ribbon*, click on *Other Views* in *Task Views*, and click on *Task Sheet*
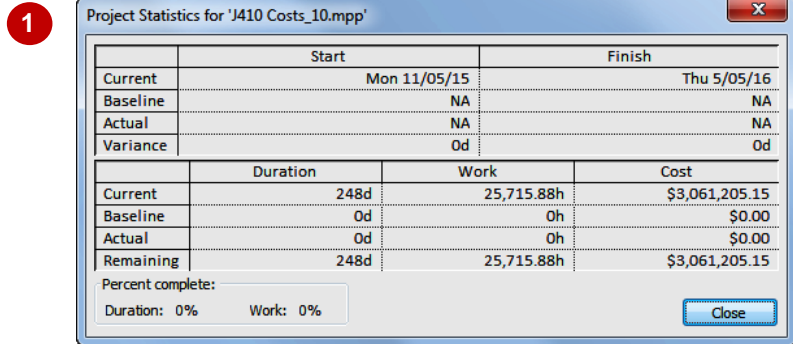
Using a task sheet view you can see the cost break-down by task…

4 Click on *Tables* in *Data* and click on *Cost*

5 Click on *Resource Sheet* in *Resource Views*, click on *Tables* in *Data* and click on *Cost*

Using a resource sheet view you can see the cost break-down by resource...

6 Click on *Gantt Chart* in *Task Views*

1

	Start	Finish
Current	Mon 11/05/15	Thu 5/05/16
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	248d	25,715.88h	$3,061,205.15
Baseline	0d	0h	$0.00
Actual	0d	0h	$0.00
Remaining	248d	25,715.88h	$3,061,205.15

Percent complete:
Duration: 0%   Work: 0%

Project Statistics for 'J410 Costs_10.mpp'

	Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining
1	⊟ Planning	$0.00	Prorated	$29,072.69	$0.00	$29,072.69	$0.00	$29,072.69
2	Create architectural pl	$0.00	Prorated	$21,375.00	$0.00	$21,375.00	$0.00	$21,375.00
3	Submit plans for appro	$0.00	Prorated	$6,100.00	$0.00	$6,100.00	$0.00	$6,100.00
4	Order materials	$0.00	Prorated	$1,597.69	$0.00	$1,597.69	$0.00	$1,597.69
5	Planning Completed	$0.00	Prorated	$0.00	$0.00	$0.00	$0.00	$0.00
6	⊟ Site Works	$0.00	Prorated	$57,275.60	$0.00	$57,275.60	$0.00	$57,275.60
7	Erect fencing	$15,900.00	Prorated	$15,900.00	$0.00	$15,900.00	$0.00	$15,900.00
8	Erect site buildings	$0.00	Prorated	$3,737.31	$0.00	$3,737.31	$0.00	$3,737.31
9	Clear and level site	$0.00	Prorated	$32,648.65	$0.00	$32,648.65	$0.00	$32,648.65
10	Prepare drainage infra	$0.00	Prorated	$2,131.44	$0.00	$2,131.44	$0.00	$2,131.44
11	Prepare cabling infrast	$0.00	Prorated	$2,858.19	$0.00	$2,858.19	$0.00	$2,858.19

4

	Resource Name	Cost	Baseline Cost	Variance	Actual Cost	Remaining
1	Architect	$28,800.00	$0.00	$28,800.00	$0.00	$28,800.00
2	Draftsperson	$3,963.08	$0.00	$3,963.08	$0.00	$3,963.08
3	Building Clerk	$1,171.15	$0.00	$1,171.15	$0.00	$1,171.15
4	Supervisor	$17,307.69	$0.00	$17,307.69	$0.00	$17,307.69
5	Rigger	$64,669.13	$0.00	$64,669.13	$0.00	$64,669.13
6	Boilermaker	$72,826.50	$0.00	$72,826.50	$0.00	$72,826.50
7	Welder	$61,509.38	$0.00	$61,509.38	$0.00	$61,509.38
8	Carpenter	$73,377.60	$0.00	$73,377.60	$0.00	$73,377.60
9	Painter	$9,675.00	$0.00	$9,675.00	$0.00	$9,675.00
10	Labourer	$84,746.25	$0.00	$84,746.25	$0.00	$84,746.25
11	Driver	$28,315.50	$0.00	$28,315.50	$0.00	$28,315.50

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For Your Reference…

To review project costs:

1. Use the *Project Statistics* dialog box (*Project* > *Project Information*)
2. Display a *Task Sheet* view with a *Cost* table
3. Display a *Resource Sheet* view with a *Cost* table

Handy to Know…

- The views can be printed out if you require a quick hard copy summary of the costs.